

## II. IN THE SPECIFICATION

Please amend the following paragraphs to read as indicated below.

A. The paragraph beginning on page 1, line 19:

Location-relevant services, which provide information or perform services based on the geographical location of a mobile client, are becoming more available. A location-relevant service can be used, for example, by a trucking company to track the positions of its vehicles in service. Another application of location-relevant systems is to provide travel-related services (e.g., driving directions) based on the position of the client. One example of a location-relevant service is described, for example, in copending U.S. patent application "Method for Distribution of Locality-Relevant Information using a Network" ("Copending Application"), application no. 09/422,116, filed October 20, 1999. To provide an example regarding the architecture and application of a location-relevant information system, the disclosure of the Copending Application is hereby incorporated by reference in its entirety.

*(Signature)*

B. The paragraph beginning on page 4, line 5:

In one application, a user who is seeking a real property can specify in the location-relevant service server a search request for a list of real properties for inspection. The search result can be pushed to his cellular phone (i.e., second mobile unit, in this instance) based on the position of the receiver (e.g. GPS receiver) installed in his vehicle, when he arrives at the vicinity and requests from the second mobile unit his search results.

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C. The paragraph beginning on page 5, line 8:

*B10*  
Figure 4 shows a second embodiment of the present invention.

*B4*  
D. The paragraph beginning on page 5, line 10:

Figure 5 shows a third embodiment of the present invention.

*B5*  
E. The paragraph beginning on page 6, line 3:

As illustrated by system 100, mobile unit 101 can send its position data, for example, over a wireless link 113 with wireless gateway 104. Positional data can be received, for example, from a GPS system or a terrestrial triangulation-based system. Figures 6 and 7 illustrate methods for obtaining a receiver position based on a global positioning system and a terrestrial triangulation system, respectively. As shown in Figure 6, in a GPS system, receiver 605 receives from satellites 601-604 respective positions P1, P2, P3 and P4 and their times of transmission. Using its local time  $t$ , receiver 605 computes distances S1, S2, S3, and S4, which are respective distances of satellites 601-604 from receiver 605. Position PR of receiver 605 can then be computed conventionally as a function of P1, P2, P3, P4, S1, S2, S3 and S4. As shown in Figure 7, under a terrestrial triangulation method, land-based transmitters 702-704 of known locations P1, P2 and P3 each provide a signal from which receiver 701 computes respective distances S1, S2 and S3 between receiver 701 and each of transmitters 702-704. The position PR of receiver 701 can be computed conventionally as a function of P1, P2, P3, S1, S2, and S3. In addition to the computed position of mobile device 101, the time at which the position was obtained can also be provided to location-relevant service server 106. This information would allow the user or location-relevant service server 106 to determine whether or not a more or less frequent update is necessary. The direction of travel of mobile unit 101

can also be provided to location-relevant service server 106. (Direction of travel can be used, for example, in a driving direction service to provide more accurate "turn by turn" driving directions—i.e., additional turns may be necessary to reorient the vehicle towards the destination.)

*B5*

F. The paragraph beginning page 8, line 26:

Figure 3 illustrates a "push-based" operation of one embodiment of the present invention. Under the push-based operation of Figure 3, at steps 301 and 302, mobile device 110 receives a command for a selected location-relevant service and enables the corresponding service at location-relevant service server 106. The selected service can be activated according to some conditions, such as a specified position reported by mobile unit 101. At the same time, at regular time intervals, mobile unit 101 provides its current position to location-relevant service server 106. Location-relevant service server 106 waits on the specified conditions for triggering the selected location-relevant service (steps 303 and 304). When the conditions for the selected service are met, the selected service is performed in accordance with the position of mobile unit 101 (step 305). Depending on whether the selected service is to remain active (e.g., prior to the expiration of a specified time period), location-relevant service server 106 returns to wait for the triggering conditions (step 306), or proceeds with other location-relevant services (step 307), as required.

*B6*

G. The paragraph beginning page 9, line 14:

Examples of other location-relevant information that can be provided includes: traffic, operating or maintenance conditions regarding the vehicle, entertainment (e.g., movies or shows played at nearby cinemas or theaters) or travel-related information

(e.g., locations of nearby hotels, points of interests, gas stations, restaurants, driving directions etc.) In system 100, for example, prior to a trip, a user can specify from his desktop personal computer a list of location-related service requests. The user seeking to buy real estate, for example, may set requests for locations of open-house events, which will then be downloaded to mobile device 110 in the form of a paging message or an email, when mobile device 101—which is installed in the user's car—arrives at the specified geographical vicinity.

*B1*

H. The paragraph beginning page 9, line 29:

The information at location-relevant service server 106 can be shared among users for many purposes. For example, the present invention provides a method for authentication for on-line transactions. For example, a user completing an on-line transaction with mobile device 110 can sign the transaction using the position data displayed on the display panel of mobile unit 101. The elapsed time since the position data was obtained can also be displayed on the display panel and used to achieve further robustness. The other party to the transaction can authenticate the user through location-relevant service server 106, which independently queries mobile unit 101 to obtain its position.

*B8*

I. The paragraph beginning page 10, line 7:

In system 100, mobile unit 101 and mobile device 110 communicate via separate wireless links 113 and 119. However, the operations described above and the attendant benefits can similarly be achieved using systems 400 and 500 of Figures 4 and 5, respectively, in alternative embodiments of the present invention. To simplify the following discussion and to avoid repetition, like elements in Figures 1, 4 and 5 are

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provided like reference numerals. In each of systems 400 and 500, rather than mobile unit 101 sending positional data to location-relevant service server 106 via an independent communication link, the position information data of mobile unit 101 and communication between mobile device 110 and location-relevant service server 106 share a common wireless link and an internet gateway. In system 400, mobile unit 101 and mobile device 110 communicate with each other over wireless link 402, and communicate with location-relevant service server 106 through mobile device 110. Alternatively, as shown in Figure 5, mobile unit 101 and mobile device 110 communicate over a wired link 501, and communicate with location-relevant service server 106 through mobile unit 101's wireless link 113. Wired link 501 can be implemented, for example, by a docking station through a standard interface. For example, if mobile unit 101 is a lap top or a personal digital assistant, such an interface can be provided by a 1394 serial bus interface. As in Figure 1, in systems 400 and 500, location-relevant service server 107 can be accessed from non-mobile or desktop client 112.

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